LISTING OF CLAIMS

This listing of claims replaces all prior versions and listings of claims in the patent application.

Claim 1. (currently amended): A method for operating a transmission amplifier, the method comprising the steps of:

feeding the transmission amplifier a supply voltage wherein, at least at a start of transmission operation or after a change in at least one operating parameter occurs, the ~~supply voltage is of such a magnitude that the~~ transmission amplifier operates in a linear region; and

compensating for any nonlinearity of the transmission amplifier via a predistortion unit for data values in an input data stream, wherein the supply voltage is reduced to an extent to which a quality of predistortion factors for the compensation for the nonlinearity of the transmission amplifier is increased by the predistortion unit, and wherein the quality of predistortion factors are independent of envelope amplitudes present in the amplifier.

Claim 2. (original): A method for operating a transmission amplifier as claimed in claim 1, wherein measurement values for the quality of the compensation for the nonlinearity of the transmission amplifier

Claim 3. (original): A method for operating a transmission amplifier as claimed in claim 2, wherein difference values between data values which are fed back from the transmission amplifier to the predistortion unit and data values in the input data stream are used as measurement values.

Claim 4. (original): A method for operating a transmission amplifier as claimed in claim 3, wherein the supply voltage is, in each case, reduced by an amount when the difference values fall below a threshold value with a predetermined probability.

Claim 5. (original): A method for operating a transmission amplifier as claimed in claim 4, wherein the difference values are obtained by forming representative mean values for the data values in the input data stream and the fed-back data values.

Claim 6. (original): A method for operating a transmission amplifier as claimed in claim 2, wherein the measurement values are passed by the predistortion unit from an adaptive regulator for the supply voltage for the transmission amplifier.

Claim 7. (currently amended): An apparatus for operating a transmission amplifier, comprising:

a voltage supply for the transmission amplifier;

an adaptive regulator for controlling the voltage supply wherein at least at a start of transmission operation or after a change in at least one operating parameter occurs, the ~~supply voltage is of such a magnitude that the~~ transmission amplifier operates in a linear region; and

a predistortion unit for processing data values in an input data stream for compensating for any nonlinearity of the transmission amplifier, with the regulator interacting with the predistortion unit, wherein the supply voltage is reduced to an extent to which a quality of predistortion factors for the compensation for the nonlinearity of the transmission amplifier is increased by the predistortion unit, and wherein the quality of predistortion factors are independent of envelope amplitudes present in the amplifier.

Claim 8. (original): An apparatus for operating a transmission amplifier as claimed in claim 7, wherein the predistortion unit forms difference values between data values, which are fed back from the transmission amplifier to the predistortion unit, and data values in the input stream, and transmits the difference values to the adaptive regulator.

Claim 9. (original) An apparatus for operating a transmission amplifier as claimed in claim 8, wherein the adaptive regulator converts the difference values for controlling the voltage supply of the transmission amplifier.